The Modelling Skulls in the Ancient Near-East[1]

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Abstract: In this article, we would like to highlight that during the Neolithisation process cultural, religious and funerary practices change. We will especially focus on a funerary practice, the modelling skulls, born during the middle Pre-Pottery Neolithic B (8200-7500 B.C.) in the North and South Levant and continues until the late Pre-Pottery Neolithic B (7500-7000 B.C.), in the same geographical area. For an unknown reason, after the late PPNB, this technique disappears from Levant but starts again in Anatolia during the Pottery Neolithic (7000-5000 B.C.). A total of eighty modeled skulls were found in the follows sites: Ain Ghazal, Jordan (middle PPNB); Beisamoun, Israel (middle PPNB); Jericho, Palestine (middle PPNB); Kfar Hahoresh, Israel (middle PPNB); Nahal Hemar, Israel (middle PPNB); Yiftahel, Israel (middle PPNB); Tell Aswad, Syria (middle and late PPNB); Tell Ramad, Syria (late PPNB); Koşk Höyük, Anatolia (Pottery Neolithic) and Çatal Höyük, Anatolia (Pottery Neolithic). We will study the eighty modeled skulls, the modelling techniques and the cultural interpretations assigned to those skulls. Our principal purpose is to see what we can learn about the Neolithic communities of the Near East from the different aspects of the modeled skulls.

Resumen: *En este artículo, queremos poner en evidencia que durante el proceso de Neolitizacion, las prácticas culturales, religiosos y funerarias cambian. Vamos a concentrar nos sobre la práctica funeraria de los cráneos modelados que nació durante el medio Neolítico Acerámico B (8200-7500 a.c.) en el Levante Norte y Sur y se perenniza en la misma región geográfica hasta el reciente Neolítico Acerámico B (7500-7000 a.c.). Después, por una rázon desconocida, la técnica de cráneos modelados desaparece en el Levante pero retoma en Anatolia durante el Neolítico Cerámico (7000-5000 a.c.). Un total de ochenta cráneos modelados fueron descubiertos en los siguientes sitios : Ain Ghazal, Jordania (medio PPNB); Beisamoun, Israel (medio PPNB); Jéricho, Palestina (medio PPNB); Kfar Hahoresh, Israel (medio PPNB); Nahal Hemar, Israel (medio PPNB); Yiftahel, Israel (medio PPNB); Tell Aswad, Siria (medio y reciente PPNB); Tell Ramad, Siria (reciente PPNB); Koşk Höyük, Anatolia (Neolítico Cerámico) y Çatal Höyük, Anatolia (Neolítico Cerámico). Vamos estudiar los ochenta cráneos modelados, la técnica de modelado y las interpretaciones culturales asociadas a estos cráneos. Nuestro principal objetivo es demonstrar que, a partir de los varios aspectos de los cráneos modelados, se puede aprender sobre las comunidades neolíticas del Próximo Oriente.*

Introduction

In this article, we would like to highlight that during the Neolithisation process cultural, religious and funerary practices change. We will especially focus on a funerary practice, the modelling skulls technique, born during the middle Pre-Pottery Neolithic B (8200-7500 B.C.) in the North and South Levant and continues until the late Pre-Pottery Neolithic B (7500-7000 B.C.), in the same geographical area. For an unknown reason, after the late PPNB, this technique disappears from Levant but starts again in Anatolia during the Pottery Neolithic (7000-5000 B.C.). A total of eighty modeled skulls were found in the follows sites: Ain Ghazal, Jordan (middle PPNB); Beisamoun, Israel (middle PPNB); Jericho, Palestine (middle PPNB); Kfar Hahoresh, Israel (middle PPNB); Nahal Hemar, Israel (middle PPNB); Yiftahel, Israel (middle PPNB); Tell Aswad, Syria (middle and late PPNB); Tell Ramad, Syria (late PPNB); Koşk Höyük, Anatolia (Pottery Neolithic) and Çatal Höyük, Anatolia (Pottery Neolithic). Throughout the next pages, we will study the eighty modeled skulls, the modelling techniques and the cultural interpretations assigned to those skulls. Our principal purpose is to see what we can learn about the Neolithic communities of the Near East from the different aspects of the modeled skulls.

Neolithisation process

This important process influences the whole prehistoric communities between 12.000 B.C. and 7000 B.C. The natoufian period, from 12.000 and 10.000 B.C., is an important transitional stage where hunter-gatherers begin a subsistence production. The first villages emerge like round houses built with hard materials. The dog is the only domesticated animal. The art is focus on animal representations. The funerary practices are already varied: on the same site, we can find primary burials, secondary burials, individual or collective burials[3].

The Khiamians, which came after Natoufians, between 10.000 and 9500 B.C.[4], are also hunter-gatherers living in houses, built with non-temporary materials but they start to incorporate the human figures within their art. The Natoufian microliths are progressively replaced by blades and the most common tools are the El-Khiam arrowheads[5].

During the PPNA, from 9500 to 8700 B.C., the round houses coexist with rectangular houses, community buildings are also created. In the funerary practices, the skull deposits are frequent. Animal figurations are mixed with human representations. Trades between Anatolia and Levant present since the Natoufian period are increasing[6].

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[3] Stordeur and Abbès (2002) : 566.
[4] *Ibid.* : 565.
[5] *Ibid.* : 566.
[6] *Ibid.*

Through the ancient PPNB, between 8700 and 8200 B.C., the agriculture is not finalized unlike the animal husbandry that already begins in Anatolia. The round houses are abandoned in aid of rectangular houses. The number of community buildings increases like the human and animal representations[7].

The middle PPNB, from 8200 to 7500 B.C., represents a new turn in this process: animal husbandry and agriculture are entirely overpowered. Villages of rectangular houses grow and are standardized. In the art, the human figure is the central representation in the form of figurines, statues or frescos. A new funerary practice, the modelling skulls, also makes a point of honor of focusing on the human being[8].

At the end of the PPNB period, the Neolithisation is complete on the whole Near East because subsistence production and organized villages are visible. Around 7000 B.C., the pottery arrival announces the beginning of the Chalcolithic phase with cultures from eponymous sites: Hassuna, Samarra, Halaf and Obeid[9].

Sometimes, the Neolithisation is named "Neolithic Revolution", however, we do not prefer to use this term because it's clear now that is a long process with different stages, in which PPNB is the apogee. It's not a sudden phenomenon. The cultural changes in PPNB phase generate the innovative tradition of skulls modelling.

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[7]   *Ibid.*
[8]   *Ibid.*
[9]   Tunca (2004) : 214.

The Eighty Modeled skulls

Ain Ghazal

This site, excavated by G. Rollefson, is situated at the N-E of Amman, Jordan. On the fifteen ha area, four different fields were opened: Central Field, South Field, North Field and East Field. In this paper, only the middle PPNB of the Central Field will be approached[10]. First, the little houses include a single room and four post holes. Secondly, they are composed of two or three rooms divided by thick stone walls. The floor is covered with a layer of mud. Storage spaces are limited: a silo replaces the living room of a house[11]. Houses are built in line with little spaces between them. External areas are not sophisticated. In total, three modeled skulls and three modelling without skulls were found in the Central Field whole belonging to middle PPNB (ca. 7000 B.C.)[12].

In 1983, four skulls were discovered in the back yard of a house from the Central Field (square 3074). They were placed in a pit under a grave containing two children[13]. Facing the S-W[14], they were disposed in form of cross: one skull before, two skulls on a central range and one skull behind[15]. Only two of the four skulls were modeled. Other bones were present near the pit: corpses of two New-born and skeletons without skulls.

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[10]   Rollefson (1997) : 287.
[11]   *Ibid.* : 288-289.
[12]   Rollefson and al. (1992) : 445.
[13] Rollefson (1985) : 55.
[14]   *Ibid.*
[15] Schmandt-Besserat (2002) : 108.

In 1985, three modelling without skulls were found in the Central Field (square 3081, locus 139)[16]. They were placed in row in a depression covered by a layer of sterile earth. No building seems to be associated[17].

A last fragmentary modeled skull was found in the Central Field in 1987 (square 2872). He was deposed in a pit situated near a house entrance dating to middle PPNB[18]. He was in contact with cranial bones of another individual because the pit disrupted an ancient grave[19]. A cache of three skulls and six graves with acephalous corpses were found nearby.

On the six indentified cases of Ain Ghazal, three skulls belong to adult males, the gender of the other three were not defined in the absence of the skulls. All of them were found in the Central Field but in different contexts: in a house, in a courtship of a house and in a non domestic context. The modellings without skulls have a particularity: the plaster was untied from the skulls. Before the 1987 campaign, the grave containing the modelling was not opened despite the fact that forty percent of the plaster was missing. Before burying, the plaster was removed from the skulls, this explains their fragmentary states[20]. The modellings were not broken during their discovery but before being buried. They are placed in different directions: a part of them face the South and the other part faces the S-W. The modelling technique used at Ain Ghazal is homogeneous but facial features are diversified. The modelling skulls can be painted. Five individuals

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[16] Rollefson and al. (1998) : 61.
[17] Stordeur and Khawam (2007) : 19.
[18] Simmons and al. (1990) : 108.
[19] *Ibid.*
[20] Rollefson and al. (1998) : 60.

have closed eyes, only one has them opened. A detail is the same for the individuals with closed eyes: a line of bitumen reproduces the eyelashes.

Beisamoun

This site is situated in Israel, more precisely in Upper Galilee, near Huleh Lake. In 1972, M. Lechevallier found a house with coated floor in Level 1 of Basin 2 (West Area). Stratigraphy is composed of three occupation layers (Level 3-1). However, only Level 1 dating from middle PPNB will be described in those pages. In Level 1, the rectangular house is composed of a principal room and an antechamber. The walls of the house are made of two ranges of stones, except the North wall formed with gravels. Floors were remade several times: the coating is thick, polished and painted[21]. Two post holes in the center of the principal room are circled by stones. The antechamber access is situated in the West wall. At the South of the antechamber, two graves and two modeled skulls were discovered. A last grave was found at the N-W corner of the principal room[22].

The two modeled skulls of Beisamoun were found in Level 1 (locus 180) on the coated floor of the antechamber, between a pavement and the principal room entrance. They face the East. A tibia was nearby the skulls and further the remains of four New-born, an entire skeleton and three skulls were found. Before the access room of the antechamber, a grave in a double pit contains a package of acephalous skeletons. Nearby the modeled skulls, twenty unbroken flint tools were placed, probably intentionally. A grinding wheel and a bruiser in the antechamber   led the excavators to believe that   this room was   used

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[21] Remains of a red paint.
[22] Lechevallier and Ferembach (1973) : 223-224.

as a workshop[23]. The two modeled skulls dated from middle PPNB period (8200-

7500 B.C.)[24] were discovered in a domestic context laid on the floor. The first

modeled skull tells us that this treatment was applied to an adult woman whose

mandible is present. On the other side, the teeth were extracted to model the

skull. The skull is not painted. All the facial features are represented. The

fragmentary state of the second modeled skull does not allow

us to obtain additional information.

Jericho

The site of Jericho, excavated from 1952 to 1957 by K. Kenyon, is situated in

Israel at the N-W of the Dead Sea. The houses of the PPNB period are rectangular

structures with lime coated floors polished and painted, centered on a courtship

with several hearths[25]. An amount of twelve skulls dated from middle PPNB

(8200-7500 B.C.) [26] was discovered in this site.

In 1953, seven skulls (D110, D111, D112, D113, D114, D115, and D116) were

excavated from Trench I (square DI, phase XVI – XVII xlii – xliii) near the walls of

a house, under several coated floors[27]. A row of three groups of three skulls,

children's skulls, a child's grave, animal figurines and flint tools[28] were found near

the modeled skulls. A total of thirty acephalous skeletons and mandibles were

also discovered.

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[23] *Ibid.* : 224.
[24] Stordeur and Abbès (2002) : 5.
[25] Cauvin (1978) : 49-50.
[26] Stordeur and Abbès (2002) : 5.
[27] Kenyon (1953) : 84.
[28] *Ibid.* : 84

In 1956, two modeled skulls (D117, D118) were excavated in the same stratigraphic context as the previous ones. They are situated in Trench I (square DI, phase XVI – XVII xlii – xliii) under several coated floors of a house[29]. Funeral remains are the same as the previous skulls: a row of three groups of three skulls facing the same direction, children's skulls, a child's grave[30], a total of thirty acephalous skeletons and mandibles[31].

An additional modeled skull (E22) was excavated in 1958 from Trench II (square EIII-IV, phase NNi), in the destruction level of a burned house[32].

Finally, two modeled skulls are listed (E20, E21) but no information about their context of discovery has been provided[33].

Among the twelve modeled skulls of Jericho, we count six women, three males and three individuals of undetermined genders. Four are those of adults, the rest of the skulls are undefined. All the modeled skulls were found in domestic context. Eleven skulls are not complete and no longer have their mandibles. Only one skull is complete and still has his mandible. Three individuals have their teeth. Nine of the twelve specimens have opened eyes. For the three others, it could not be defined if their eyes were opened or closed. Among the nine skulls with eyes opened, for eight individuals bivalve shells are used and for one individual kauri are applied. Jericho is not the only site where shell insertion in the eyes was employed. By now, other examples of this practice are known in Yiftahel. All the

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[29] Kenyon (1956) : 74.
[30] *Ibid.* : 75.
[31] *Ibid.*
[32] Kenyon and Holland (1981) : 310.
[33] *Ibid.* (1981) : 436.

skulls have the same brown chocolate color with traces of a pink color. Two specimens have a particularity: the first one has three parallel lines on the top of his crania; the second one has dark lines under the nose, described by K. Kenyon as a kind of moustache.

Kfar Hahoresh

This site, excavated by N. Goring-Morris, is situated in Israel on the West slope of the Nazareth hills in Lower Galilee. This little area doesn't go beyond one hectare and is dedicated to closeness population as a local funerary center. The top of the hill near the site provides a panoramic view of the Lower Galilee and the surroundings. This topographic particularity probably influences the choice of the area. The excavations extend on a surface of 425 square meters. We were able to distinguish at least six levels that reflect the long occupation of the site. We find four main activity units across the six levels of architecture[34]:

- The funerary Center: it includes a lot of lime coated surfaces, walls, cists, platforms, facilities and other tombs.

- The worship Area (N-W): it is situated near the funerary center. We can found plastered surfaces of various shapes and sizes, several facilities (monoliths and stele) and walls.

- The garbage Deposit: it stretches on the South and West sides of the excavations. It is above, below and around the worship area. It is associated with fireplaces and cooking pits. A big amount of cooking

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[34] Goring-Morris (2005) : 92-93.

pots is mixed with animal bones and other wastes that may arise from rituals.

- The production and maintenance Area: it is localized at the East of the site. It includes oven, hearths, platforms and objects (axes, grindstones, hammers and other grinding tools) linked to lime preparation and coating.

The first modeled skull (KHH-Homo1) was found in the production and maintenance Area (East), the second and the third skulls were excavated from the worship Area (N-W). The three skulls date from the middle PPNB (ca. 8000-9500 BP uncalibrated)[35].

In 1991, the first modeled skull from Kfar Hahoresh was excavated from a pit at the extreme South of Trench I, in the production and maintenance area (East), under several lime coated floors. The pit, dug in a house, contains, in addition to the modeled skull, an acephalous gazelle lying on its left side and human bones. Around the pit, human bones, a child's grave, gazelle bones (locus 1003), an acephalous skeleton with ox bones (locus 1005) and another acephalous skeleton (locus 1020) were also discovered[36].

In 1994, a second modeled skull was excavated near the worship Area in the West part of the principal field (Locus 1036)[37]. The floor, on which the modeled skull was posed, is associated with a small oval stone installation ; it's

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[35] Goring-Morris and al. (1995) : 37.

[36] Goring-Morris (2005) : 40.

[37] *Ibid.* : 90.

function is not mentioned[38]. Two skulls were in contact with the modeled one. Close to the pit, twenty skeletons were discovered[39].

The third modeled skull was excavated in 1997, like the previous one, near the worship Area, in the West part of the principal Field[40]. Deposited in a pit, it is associated to human bones (at least four individuals), gazelle bones, arrowheads and shells. The items and the funerary remains seem to reproduce the profile of an animal[41]. Further, the human bones of twenty individuals, animal bones and fragments of bust statues were also discovered[42].

M. Bonogofsky reported three additional modeled skulls. They are just listed without any explanation about the context of discovery or description. She signals a fragmentary modeled skull, a complete modeled skull and a last skull probably modeled[43]. No other book or article mentioned these specimens.

The first modeled skull is the one of a twenty-five year old adult, the two others are those of young adults. Two of them were deposited in pits. The first was found in a house and the second was associated to a undefined building. The first skull is not complete because its mandible is missing and the second one is fragmentary. According to Y. Goren, N. Goring-Morris and I. Segal, the first and the second specimens were stylistically similar[44]. The first skull was covered by a white coat painted in red ochre but the second is painted with darker red ochre.

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[38] Goren and al. (2001) : 676.
[39] Goring-Morris (2005) : 90.
[40] *Ibid.* : 93.
[41] Goring-Morris and al. (1998) : 2-3.
[42] *Ibid.*
[43] Bonogofsky (2006) : 52.
[44] Goren and al. (2001) : 677.

Nahal Hemar

The small calcareous Nahal Hemar Cave, excavated by O. Bar-Yosef and his team, in Israel, is situated at the junction of two wadis flowing down from the Judean mounts to Dead Sea basin. The cave entrance is one meter high and the principal room has an area of thirty-five square meters. Eighty five percent of the historic and prehistoric sediments are lost because of pillages during the sixties and the eighties. The fifteen percent remaining permit to define four distinct layers (Layer 1-4). Only the most ancient layer (Layer 4), dating from PPNB, will be discussed in those pages. During the ancient occupation of the Cave, the items were put on the bedrock. These were daily used utensils like a sickle, a bone spatula, baskets and a bitumen (or collagen) container. Other discoveries are more remarkable: stone masks, modeled skulls with collagen, small figurines and wood beads. The specificity of the objects and the lack of light in the Cave do not make a dwelling place during the PPNB. It appears that it is used to store ritual and domestic objects[45]. The modeled skulls discovered in 1983, in Layer 4, belong to the PPNB (7000-6000 B.C.)[46].

For the three individuals from Nahal Hemar (Homo2, Homo8 and Homo9), the modelling technique is similar but for the third individual it is not accomplished (cf. Infra The modelling techniques). The three specimens are adult males aged from twenty-five to fifty years old. Their discovery context is particular because it's not a domestic or an isolated one. It's probably a sacred area where rituals take place. The presence of ritual objects indicates clearly

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[45]   Bar-Yosef (2003) : 74-76.

[46]   Bar-Yosef and Alon (1988) : 5.

ritual practices where modeled skulls may have play a major role. Traces of collagen and hairs were found on the stone masks[47]. They have also been repainted several times, indicating a repeated use[48]. A mask could be attached on the frontal part of the skull and the collagen on the top of the skull was used to fix a kind of wig. This fact can explain the lack of modelling on the skull faces because their human aspect is rendered by the mask and the hair addition.

Yiftahel

This site, excavated on four hectares by H. Khalaily, I. Milevski and N. Getzov, is situated in Israel more precisely in Lower Galilee, at twenty-five kilometers at the East of Haifa. Two major occupation periods were distinguished: a PPNB period (8000-7000 B.C.) and a Chalcolithic installation. The middle PPNB layers enlarge on nine sectors including a straight plan building which foundations are made in mud or in stones[49]. In sector I, two big rectangular buildings (building 501 and 522) and small one are observable. Building 501 comprises two doors at the West, post holes, facilities and several graves[50]. In 2008, three modeled skulls were excavated, in sector I, near building 501. The three modeled skulls (Homo1, Homo2 and Homo3) aligned in a row are situated in a pit of the open Area 402 at the North of building 501 (square L4187, sector I). In the same sector, remains of flora and fauna, flint tools, a primary

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[47]   *Ibid.* : 24.
[48]   Bar-Yosef (2003) : 79.
[49]   Khalaily and al. (2008) : 4.
[50]   Milevski and al. (2008) : 38.

grave and a secondary grave[51] were also found. Radiocarbon analysis defined that the modeled skulls dated from middle PPNB (8000-7000 B.C.)[52].

The three skulls are those of adults. They were excavated from a pit in a domestic context. Despite the fragmentary state of the third skull, it seems that the three skulls have undergone the same treatment. The eyes recreated by shells are opened and strongly remind the modeled skulls from Jericho.

Tell Aswad

This site is situated in Syria at the S-E of Damascus. It was discovered in 1967 by H. de Contenson who led two surveys in 1971 and 1972. New excavations, conducted by D. Stordeur, have been undertaken from 2001 to 2006. The excavation area enlarges on one thousand square meters. PPNA doesn't appear in the stratigraphy. The major phase of the site is the middle PPNB. There, big round houses are associated to diversified furniture and rich funeral remains. The end of the occupation reveals a late PPNB layer. A third layer containing grinding tools and large pits with coarse potteries belongs to ancient Neolithic of Byblos[53]. In 2001, two sectors have been established: Sector C at the West and Sector B at the East[54]. In 2006, the stratigraphy of the East area has been defined: eighteen PPNB layers (from B12 to B-5) were ascertained[55]. We count a total of eight modeled skulls and a modelling without skull, discovered in Sector B, at the East of the tell. A first skull deposit was found in the ancient funerary area of Layer B0

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[51]   Khalaily and al. (2008) : 5-7.
[52]   *Ibid.* : 3.
[53]   Stordeur (2006) : 2.
[54]   *Ibid.* : 3.
[55]   *Ibid.* : 3-4.

(Middle PPNB). A second one was discovered in the late funerary area of Layer B-5 (Late PPNB).

In 2003, an external funerary area (Structure 641), probably associated to a round house with a damaged masonry, was excavated from Layer B0. At the South, this space is limited by five basalt heaps forming a semicircle. Several hearths are present, used as grave indicators. One of those signalizes an acephalous gazelle. The excavated surface shows a high concentration of ashes (bone remains) of which combustion has not been performed in situ. The ashes have been discharged repeatedly on human bones. Pistachio pieces, maybe funerary offerings, were detected. The area is structured by mud walls and basalt blocks that individualize five burial groups composed of successive deposits joining isolated skulls and complete skeletons:

- Group I: This group includes a non-modeled skull, five crowded skeletons, a reed bed, beads and an arrowhead.

- Group II: This group contains six non-modeled skulls, an adult's skeleton and a child's skeleton.

- Group III: This group counts an adult's skeleton and a child's skeleton.

- Group IV: This includes two bones (a tibia and a fibula), a sixteen-seventeen year old skeleton, an animal figurine and a flint dagger.

- Group V: This group is composed of adult and child's bones belonging minimum to four individuals[56].

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[56] Personal communication from D. Stordeur

The space containing the four modeled skulls (671-CS1, 671-CS2, 671-CS3, and 671-CS4) has been carefully installed: a round basin was dug and circled by a wall which inner surface is coated. In this structure, five skulls were installed in a row near the wall as follows: two modeled skulls, one non modeled skull and two modeled skulls. The skeletons of five individuals are crowded over but in contact with the five skulls. Four of those skeletons are acephalous, the fifth one is complete. The remains of a reed bed and other funerary remains are linked with group I (cf. supra)[57]. This first modeled skulls deposit dates back to middle PPNB (8200-7500 B.C.)[58].

The second modeled skull deposit (structure 741), found in 2006, is situated in B-5 layer (late PPNB). The architectural structures discovered there are the same as in the ancient funerary area: big round houses are associated to diversified furniture and rich funeral remains. Not far from the modeled skulls, a New-born grave's (from B-1 layer), three individual's graves and human bones mixed with ox bones (from layer B-2) were excavated. The little pit containing the modeled skulls was dug in the ruins of house EA45 (Layer B-4) which a wall, a hearth, a platform and a grinding wheel are still in place. Elsewhere, the pit digging corresponds to the outer hearth face of house EA45. Four modeled skulls (741-CS1, 741-CS2, 741-CS3, and 741-CS5) and a modelling without skull (741-S7) are associated to an isolated mandible and a seven-eight year old child's skull. The modeled skulls are attached together by mud pieces and forming a dense mass around the child's skull (only one modeled skull is isolated from the mass).

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[57] Stordeur (2003) : 110.
[58] Stordeur and Abbès (2002) : 5.

A New-born skeleton was put on these[59]. The second deposit belongs to late PPNB (7500-7000 B.C.)[60].

The nine specimens of Tell Aswad are of unknown age and gender. However, the facial features of some skulls are more masculine or feminine. The first deposit was dug in an external area while the second was placed in the ruins of a house. The contexts are different but both deposits of skulls were found in pits. In both cases, the modeled skulls are grouped together and directly associated to each other. The orientation is not constant: Five individuals face the North, two face the East, one faces the West and the last one faces the North or the East. Four of the nine skulls are complete with their mandibles. One modeled skull is incomplete but has his mandible. The teeth are present on five individuals. Eight of the nine individuals have closed eyes to give them an asleep aspect. Three of those closed eye skulls have black eyelashes made by a line of bitumen or charcoal. Like in Tell Ramad (cf. infra), three skulls from Tell Aswad have necks/bases: clay mass were inserted in the foramen magnum. Seven skulls are white but covered by a red paint. Two skulls are yellow colored.

Tell Ramad

This site is situated in Syria at twenty kilometers at the South of Damascus, on a basaltic plateau in the foothills of the Anti-Lebanon Mountains.

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[59] Stordeur (2006) : 16-17.
[60] Stordeur and Abbès (2002) : 5.

The site area of three ha was excavated by H. de Contenson on one thousand five hundred square meters[61]. Three occupation layers are distinguished:

- Layer I: this lower layer is placed directly on the virgin soil. It is characterized by oval houses semi-buried of three to four meters diameter. The walls are mud coated. The floors are either lime coated, or paved or strewed of mud[62].

- Layer II: this layer extends on the whole excavated area and is composed of two different architectural types: either big rectangular houses with mud foundations and adobe walls which floors are not coated; either smallest houses built in stones or in adobe with lime or clay coated floors. The rectangular rooms are put one against each other or they are lined up regarding the alleys and the courtships[63].

- Layer III: situated in the N-W part of the site, it is characterized by big pits containing filling composed of loose grey colored ashes. No houses are contemporary of those pits[64].

The twenty-five modeled skulls were excavated from Layer's I[65] and II[66]. All of them belong to late PPNB (7500-7000 B.C.)[67].

In 1965, a first modeled skull deposit was excavated from Layer II (square M4NE, 1m60). The skulls were placed near the stone foundations of a house. It's impossible to determine if they are inside or outside the house due to the

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[61] Cauvin (1978) : 58.
[62] De Contenson (2000) : 7-10.
[63] *Ibid.* : 10-15.
[64] *Ibid.* : 15.
[65] De Contenson (2000) : 9.
[66] *Ibid.* : 14-15.
[67] Stordeur and Abbès (2002) : 5.

erosion. Near the skulls, bones coated with lime painted in red color and a goat skull were found. Other funeral vestiges were discovered farther: in M4NE, a skeleton; in L4, a skull, a skeleton and a child's grave; in L6, a skull, bones, a skeleton[68] and stone beads[69].

In 1965 again, a second modeled skull deposit was excavated from a house of Layer II (square H10 NE, 0-25 cm). Fourteen individuals have been disposed in small groups in a pit. They are separated from each other by clay pieces coated with lime and painted in red. Potteries, bones and a mandible are associated to the modeled skulls. Farther, we observe, in H10, an adult skeleton and a child skeleton; in H10 NE, two clay statues[70].

A last deposit, containing eight modeled skulls, was excavated near a house in 1966 (square M4SO, 4m). Trunk shaped statues were found near the skulls. Farther, we notice the presence of a child's skeleton (M4 NE), a twelve year old skeleton (M4 SO[71]) and flint tools[72].

In 2006, J. Anfruns and J. Oms made new anthropological studies on the bones of Tell Ramad. They brought out twenty-seven modeled skulls. All the studied bones are those of fifty-six individuals. The modeled skulls represent 48,2%, that is to say nearly the half of the exhumed persons. Regarding the age of the modeled individuals, fourteen are adults and two are immature. For the coated and painted skulls, five individuals are adults and one is immature. The painted skulls are in majority those of children, only one is an adolescent. Among

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[68] De Contenson (2000) : 56.
[69] *Ibid.* : 117.
[70] *Ibid.*
[71] According to Denise Ferembach, the skeleton is situated in M4 NO. Ferembach (1970) : 248.
[72] De Contenson and J. Van Liere (1966) : 171-172.

the modeled skulls, eight are females and five are males. Previously, according to the H. de Contenson descriptions, we have talked about twenty-five modeled skulls. In this recent study by J Anfruns and J. Oms, the modeled skulls would range on twenty-seven. However, we are unable to tally the descriptions of H. de Contenson with the anthropological study of J. Anfruns and J. Oms because we have no detailed descriptions of skulls or their inventory numbers but only their genders and ages.

Among the twenty-five individuals of Tell Ramad described by H. de Contenson, we count four males, seven women and fourteen individuals whose gender was not determined. The age groups are diversified: we add up a child, six adults, two young adults and sixteen individuals whose age remains elusive. The ages of seven individuals were determined and varied between thirteen years old and fifty years old. The twenty-five modeled skulls are localized in domestic context but their orientations are unknown. A skull only possessed his mandible, the cranial state of the other is not clear. Three individuals have teeth. Eight modeled skulls have opened eyes fit with iris. Twenty-one individuals had necks/bases, like in Tell Aswad (cf. supra). Twenty one skulls are white colored with some traces of red color.

Çatal Höyük

This site was found by the end of the fifties by J. Mellart. It was dug four times between 1961 and 1965. Since 1993, an international archaeological team, supervised by I. Hodder, has resumed the searches[73]. The Sector South regroups

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[73] Anonyme, History of excavations, http://www.catalhoyuk.com/history.html, 2005.

square houses built with adobes. The houses are made of a large room which a smallest one is sometimes added[74]. A modeled skull was excavated in 2004, in a house of the South Field.

The modeled skull was discovered in house 42 of the South Field (section 202, layer V-IV). The building 42 is composed of two platforms (F.1501 at the N-E and F.1502 at the South) each comprising a niche (F.1508 and F.1509). The South platform is surmounted by a plastered bench (F.1503) and a basin (F.1505). The floor of this structure has been carefully coated with a white plaster of high property. The dismantling of the South platform revealed a child's grave (F.1512), containing, besides the corpse, a shell and two haematite beads. The remains of an adult male and a cache filled with obsidian tools were deposed over the child's body. A second grave (F.1515) containing adult's bones and child's bones overhang the first one (F.1512). Over the bones, a little marble statue was placed. Near the graves, beads of different sizes and varied objects were put. Three graves were discovered on the N-E platform. The first one contains a New-born skeleton (F.1511) whereas the second one contains three individuals: a New-born skeleton (F.1516) was deposed over the skeleton of an adult woman (F.1517) who holds a modeled skull on her chest[75]. The radiocarbon analysis dated the modeled skull to Pottery Neolithic (7200-6200 B.C.)[76]. Building 42 is similar to the other buildings of Çatal Höyük but has some special features in terms of its construction, its function and its use. The structure possessed domestic features

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[74] Mattews and Hodder, Introduction,
http://www.catalhoyuk.com/archive_reports/1994/ar94_01.html, 1994.
[75] Chaffey and MacCann, Excavations of south area : Building 42,
http://www.catalhoyuk.com/archive_reports/2004/ar04_13.html, 2004.
[76] Cauvin (1994) : 20.

(hearths and ovens) but also "ritual" features (platforms and bench). Actually, the platforms comprising five distinct graves seem to be the center of ritual activities[77]. This modeled skull is remarkable because of its discovery context. An adult woman in a flexed position holds the skull on her chest, her head posed on it. A New-born skeleton stands on the two individuals. This disturbing scene reminds us an image of the family nucleus (probably symbolic because no parental bond has been proved between the three individuals). The various components of the building and the presence of five graves among which the woman with the modeled skull make this place a very special space.

Koşk Höyük

This site is situated in Anatolia, in the Nidge province. The eighteen meters high tell contains late Neolithic and Chalcolithic layers. The excavation, conducted by U. Silistreli, starts in 1981 until 1991 and starts again by A. Öztan and S. Özkan in 1995. A lot of adult and children's graves were discovered on the site. It is probable that some of them were in contact with the modeled skulls. However, no other information about the background of the site is provided. Between 1985 and 2006, a total of thirteen modeled skulls have been exhumed[78]. All of them dated from Pottery Neolithic (ca. 6000-5600 B.C.)[79].

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[77] Chaffey and MacCann, Excavations of south area : Building 42, http://www.catalhoyuk.com/archive_reports/2004/ar04_13.html, 2004.
[78] Özbek (2009) : 380.
[79] Bonogofsky (2006) : 21.

In 1985, the first modeled skull (Kşk.1985) was localized in a pit[80] of Layer 3 at the East of the tell[81]. The skull goes with those items: two bowls, flint tools, bone tools and weapons. We have no further information.

In 1987, a second modeled skull (Kşk.1987) was found on a mud bench inside a building of Layer 3[82]. No additional information is given.

In 1989, two modeled skulls (Kşk.1989.1 and Kşk.1989.2) were discovered on the destruction floor of Layers 2 and 3 (Area G/8-9). We don't have a detailed description of the context. The skulls are circled by varied objects (pottery, animal bones, beads, horn, ashes and charcoal) but we aren't sure that they are associated to the skulls. However, if the skulls and the objects form a set, the objects can be funerary offerings[83].

In 1990, two modeled skulls (Kşk.1990.1 and Kşk.1990.2) were excavated but the context of their discovery is unknown. They are associated to a non-decorated fragmentary skull[84].

In 2000, five modeled skulls (Kşk.2000.1, Kşk.2000.2, Kşk.2000.3, Kşk.2000.4 and Kşk.2000.5) were found on a mud pedestal (1x1, 2m) of Layer 2 (Area H/11). We have no additional information about the context. A bead necklace and a bone hallmark were discovered in the same time. They were not immediately considered as modeled skulls because of their fragmentary states. All the skulls were stuck to each other facing the same direction[85].

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[80] *Ibid.*
[81] Bonogofsky (2005) : 126.
[82] *Ibid.*
[83] *Ibid.* : 127.
[84] Bonogofsky (2005) : 127.
[85] *Ibid.* : 128-129.

The last two modeled skulls (Kşk.2006.1 and Kşk.2006.5) were found in 2006 on a plastered floor of a house in Layer 2 (Area I/10). They form a row also comprising three non-modeled skulls. The modeled ones were placed at both ends of the line. Three pots and the head of woman figurine are associated to the skulls[86].

Among the thirteen individuals of Koşk Höyük, we count: four adult males, three adult women, a child and five undetermined specimens. On twelve skulls, the mandible is still in place. The teeth of ten individuals are present. All the modeled skulls were found in varied contexts (pit, destruction floor, houses) sometimes alone or in small groups with various objects that can be interpreted as funerary offerings (remains of copper, beads, animals bones, horns, ...).

The Modelling Techniques

To understand the method used to recreate those faces, we will have a look on the modelling technique. Two different types coexist: the first one with collagen and the second one with plaster.

Among all the examples of modelling skulls, the three specific individuals from Nahal Hemar are made with pure collagen (this black glue can be obtained by boiling animal bones[87]). They are the only skulls who are not created with plaster but also the coating not covers the face. In those cases, collagen is used for its adhesive property. It has been spread in four stages: first, collagen is mixed

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[86] Özbek (2009) : 380-383.
[87] Rollefson (1998) : 101.

with gravels to make it plastic[88]; secondly, a thin layer is spread on the top of the skull and worked with a comb. The coating is tamped down to remove the smears of tool[89]; thirdly, a stuck of collagen is rolled on a hard surface to create little cords[90]; fourthly, the cords are disposed in form of net on the previous layer. Two or three cords are attached to covert entirely the top of the skull[91]. The three modeled skulls from Nahal Hemar have been discovered in a cave, which can't be used as house. It was inferred that it's a sacred place where ritual ceremonies have been occurred. The discovery of ritual objects strengthens the hypothesis: on masks, residues of collagen and hairs have been found. A mask might have been attached on the frontal part of the skull and the adhesive property of collagen permits the maintenance of hairs. This theory explains the absence of modelling on the face and the reason why collagen replaces the plaster.

At Jericho, the analysis of two skulls (D111 and E22) helped to define that in one case two different plasters are used, one for the external part and another for the internal part of the skull; in the second case, one plaster is used for the both parts. Plaster pieces are put on the skull in several layers. The plaster composition corresponds to the lithostratigraphy of the Judean desert. The two modelling skulls from Jericho have been made with local materials. The plaster is not baked, so despite a warm stable climate, their state of preservation is poor[92].

In the case of Beisamoun, the plaster of the first skull is composed of pure clay and chopped straw spread in one layer. The modeling of the second

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[88] Yakar and Heshkovitz (1988) : 61.
[89] *Ibid.*
[90] *Ibid.*
[91] *Ibid.*
[92] Goren and al. (2001) : 679-681.

individual is also spread in one layer but the plaster composition is different: It's a mix of lime, clay, ashes, haematite, ocher and calcite crystals, covered by glue. Calcite crystals are frequently used in the PPNB plasters because they gleam under the light. Therefore, the plaster has been polished to increase the brightness of the calcite. Both skulls have been modeled in different ways; they have been found in varied states of preservation despite they have been lay in the same place[93].

At Kfar Hahoresh, the technique is still different: for the first skull (KHH-Homo1), the sinus and nasolacrimal canal have been coated with bitumen to drain the plaster in those cavities; nasal cavities, orbits and cheekbones are recovered with a mix of lime and ashes; orbits, palate and zygomatics are filled with a mix including twice as much lime than ashes; the face is modeled with a mix including five time as much lime than ashes. The same composition is used to make the eyes, the mouth and the nose; finally, the modelling is covered with a red ocher paint. For the second skull (1994), the technique is simple: two layers composed of pure lime are superposed. The pigments used for painting the modeling are specific: the analysis determined the presence of cinnabar and antimony, this mineralogy doesn't exist in Levant but in Transcaucasia and Anatolia[94].

Despite the fact that we don't have a lot of studied examples of modeled skulls, we easily understand that the modelling is complex and differ according to the site. The plaster or collagen modellings are not simple coatings with several

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[93] *Ibid.* : 681-682.
[94] Goren and al. (2001) : 682-685.

layers but real techniques with important stages probably made by people that have a good knowledge of those techniques. So we can say that the modeling technique is a specialized work.

Cultural Interpretations

In the next pages, we would like to discuss about the cultural interpretations peculiar to modeled skulls by two ways: what sort of information can we learn about the Neolithic communities from the modeled skulls? ; The symbolic aspect given to the modelling practice improves the researches?

In the light of our results about the genders and ages of the modeled skulls, it's clear that the individuals are not selected according to this criterion. We have count approximately an equal total of males and women (nineteen men for seventeen women) and the presence of two children. So we can say without doubts that the modelling technique is not reserved for individuals of a specific gender or age.

Throughout the description of the skulls, we spoke about the presence or the absence of the mandibles and the teeth. This fact permits to us an observation about the modelling technique: Two techniques coexist. In the first one, the coating is applied on a complete skull whereas in the second one, the coating is applied after the removing of the teeth and the mandible.

The discovery contexts give us other hypothesis about the life of those communities. Modelling skulls are founded in collective deposits or in individual deposits. According to I. Kuijt[95], the deposits are installed by one family or by

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[95] Kuijt (2000) : 155-156.

several families. If the deposit is created by one family, this implies that she have

to wait the death of several members to withdraw more skulls. The numbers of

skulls, the death rate and the time that a corpse needs to be decomposed impose

a long waiting time varying from two years to twenty years. In this case, this

family must have an economical and political influence over the entire

community. However, the archaeological data don't prove the presence of such a

family. If the deposit is made by several families, the skulls are removed from

several members in a shorter time, allowing one treatment for all the skulls.

According to the death rate and the size of a community, this type of ceremony

could have occurred once a year. Whatever the way of creating deposits, this

action needs the implication of the entire community.

The different objects and the other funeral remains are hard to interpret.

They might be funerary offerings or not so we just want to highlight that the

funeral remains or the varied objects are relatively recurrent despite the

geographical distance between the site and the chronological aspect.

The main purpose of plastering is to reproduce the flesh of the faces and

give them a living appearance. To make it possible, all facial features are

reproduced: nose with nostrils, eyes opened or closed with eyelashes, the mouth,

the ears, the chin and the cheekbones. The features are recreated with a high

precision and a red/pink paint is finally applied to give back to the face all his

humanity.

On three sites, Koşk Höyük, Tell Ramad and Tell Aswad, some skulls have

necks/bases. According to H. de Contenson which leads Tell Ramad site in the

sixties, the necks are used to put the skulls on acephalous statues that were discovered near a part of the Tell Ramad skulls. He develops his theory because in New Guinea the modeled skulls were stick in acephalous anthropomorphic figurines. We can't privilege this theory because the statues could be broken before they were buried or they can have another use. In Koşk Höyük and Tell Aswad, the excavators have another theory: they see the neck more like flat bases that permit to place the skulls.

We can ask ourselves about the person behind the modeled skull: who is represented? Deceased persons or the living people from the communities are taking as models. We know that the modeling didn't occur immediately after the death because the defleshing before the skull levy needs time. So the artist can remind the facial features of the deceased person? It's conceivable that he can appeal to his visual memory. However, another solution can be formulated: he can be inspired by the member faces of the surrounding community. Both hypotheses are possible. Scholars have sometimes divergent opinions about the individualization of the modelling: For example, J. Cauvin[96] and I. Kuijt[97] are in favor of an idealized representation while D. Stordeur[98] defends the peculiarity of the faces. Like her, we support the idea that the modeled skulls are individualized because is not question in this technique of a mass production. The facial features of each skull varied from each other and the addition of unique details on some of them can reinforce the theory of individualized faces.

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[96] Cauvin (1978) : 135-136.
[97] Kuijt (2008) : 8-13.
[98] Stordeur (2003) : 114-115.

Ancestor cult is associated to plastered skulls for a long time. In 1953[99], K. Kenyon is the first to put forward this hypothesis from the excavations that she supervised at Jericho. She inspires that theory from modern anthropology: in New Guinea, in the 19th century, the modeled skulls are used to preserve the skull of ancestors or of enemies. According to her, the care bring to the Levantine skulls reflects an ancestor cult devoted to old men or chiefs. After, her hypothesis is recovered by J. Cauvin[100] and U. Silistreli[101]. It's important to point out that among the eighty modelling skulls discovered, at present, the number of women and men is nearly equal. At Koşk Höyük and Tell Ramad, the presence of children is also attested. The ancestor cult is an attractive theory but it must be tempered. K. Kenyon asserts that this type of cult is focused on old males. As we state, it's not the case in the Near East. However, we not reject this theory because the different oceanian tribes do not practice all the plastering solely on male subjects. It's also used on women and children. This theory takes a new dimension because the action of modelling a skull gives to it an ancestor status. The age and the sex of the individuals are not so important. In this context, the ancestor cult could occur in the Near East.

According to D. Stordeur[102] and N. Goring-Morris[103], plastered skulls are the symbol of a social organization. The skulls with individualized faces are reflection of a family nucleus and wider of the social organization of the Neolithic society that practice this technique. The choice of the skull may have been made

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[99] Kenyon (1953) : 86-87.
[100] Cauvin (1994) : 152-154.
[101] Bonogofsky (2005) : 133-134.
[102] Stordeur (2003) : 114-115.
[103] Goring-Morris (2005) : 94-95.

from a hierarchical system. This new practice must be viewed from another angle: man is positioned differently regarding his image and the world around. In this changing context, where the animal husbandry and agriculture born in the same time as the setting up of the villages, man, through the modelling skulls, make a point of honor of representing himself. D. Stordeur emphasizes these facts and said: *"L'homme se met au centre, il ne quittera plus jamais cette position"*[104]. The Neolithisation is causing social, economical and religious changes. It's therefore conceivable that the modelling have been applied to individuals with a specific status within the Neolithic community.

According to I. Kuijt[105], the modelling skulls play an important role in the collective memory because in the Neolithic societies they have strong spiritual and symbolic impacts. At the beginning, the skulls are individualized but with the transition from one generation to another gives them a symbolic aspect for the community. The commemoration lead to a double forgetting generate by the high mortality frequency and the use of skull in the long term.

We know that modeled skulls should have an important place in the community. At some point, it's probable that they were positioned in the houses to permit to the inhabitants to keep a link with the dead. A lot of skulls are excavated from pits, it implies a two-step life. First, they were visible and handled. After, they are abandoned and buried[106].

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[104] Stordeur (2003) : 114.
[105] Kuijt (2008) : 1-16.
[106] Stordeur and Khawam (2000) : 22.

Conclusion

The purpose of this paper was to see what kind of cultural interpretations can we made about the Neolithic population through the particular practice of modelling skulls. We draw several conclusions. The skull choice is not based on the gender and the age of the individuals. We learn from the bony part that two modelling techniques coexist: the complete skull is modeled or the modelling is done without mandible and teeth. The discovery context informs us about the different utilization stages of the skulls. At the beginning, they are visible and handled but after, they are discarded and buried. A skull deposit can be set up by a single family or by several families of the community. The modelling is realized carefully, the represented individual might be the dead person or other persons from the community used as models. A base/ neck can be added to the skulls to assure them maintain. The paint covering the coating is the final touch brings to the modeled skull to give the appearance of flesh. The color variations must be the reflection of individualization between the individuals. The ancestor cult can be considered if the act of modelling provides to the individuals a special status. We emphasize about the significant role played by the Neolithisation process. During this time, we can imagine that some people with a high status within the communities were chosen to undergo this treatment. We just want to say that grey area remains but we are sure that the intensive researches made actually by the scholars all around the world will shed lights on the modeled skulls in the future. To finish, we quote an extract of Y. Le Fur book's, *"La mort n'en saura rien"*:

« *Cette réunion de visages disparus et réapparus ne se prive pas pourtant des émotions qui bouleversent l'humain, de la sérénité à l'angoisse, de la mélancolie à l'humour, pour séduire et transir, méditer ou sourire.* »[107].

Bibliography

Anfruns, J., and Oms, J. «Un nouveau regard sur les restes anthropologiques du site néolithique de Tell Ramad (Syrie)». *Syria* 83 (2005) : 115-124.

Anonymous. «History of excavations». http://www.catalhoyuk.com/history.html, 2005.

Bar-Yosef, O. and Alon, D. « Nahal Hemar Cave. The Excavations ». *'Atiquot English Series* XVIII (1988) : 1-30.

Bar-Yosef, O. «Early Neolithic Stone Masks». *In* M. Ozdogan, H. Hauptman, N. Basgelen (eds.). *From Village to Cities. Studies Presented to Ufuk Esin* (2003) : 73-86.

Bonogofsky, M. «A Bioarchaeological Study of Plastered Skulls from Anatolia: New Discoveries and Interpretations». *International Journal of Osteoarchaeology* 15 (2005) : 124-135.

Bonogofsky, M. «Complexity in Context: Plain, Painted and Modeled Skulls from the Neolithic Middle East». *British Archaeological Reports International Series* 1539 (2006) : 15-28.

Cauvin, J. *Les premiers villages de Syrie-Palestine du IXème millénaire au VIIème millénaire avant J.C.* Lyon, 1978.

Cauvin, J. *Naissance des divinités. Naissance de l'agriculture. La révolution des symboles au Néolithique*, Paris, 1994.

Chaffey, G. and S. MacCann, S., «Excavations of south area : Building 42». http://www.catalhoyuk.com/archive_reports/2004/ar04_13.html, 2004.

Contenson, H. de and Van Liere, W. « Seconde campagne à Tell Ramad, 1965. Rapport Préliminaire ». *Annales archéologiques arabes syriennes* XVI (1966) : 167-172.

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[107] Le Fur (1999) : 151.

Contenson, H. de « Ramad, site néolithique en Damascène (Syrie) aux VIIIe et VIIe millénaires avant l'ère chrétienne ». *B.A.H.* 157 (2000) : 7-53.

Goren, Y., Goring-Morris, N. and Segal, I. «The Technology of Skull Modeling in the Pre-Pottery Neolithic B (PPNB): Regional Variability, the Relation of Technology and Iconography and their Archaeological Implications». *Journal of Archaeological Science* 28 (2001) : 671-690.

Goring-Morris, N., Goren, Y., Horwitz, L., Bar-Yosef, D. and Heshkowitz, I. «Investigations at an Early Neolithic Settlement in the Lower Galilee: Results of the 1991 Season at Kefar HaHoresh». *'Atiqot* XXVII (1995) : 37-62.

Goring-Morris, N., Burns, R., Davidzon, A., Eshed, V., Goren, Y., Heshkovitz, I., Kangas, S. and Kelecevic, J. «The 1997 Season of Excavations at the Mortuary Site of Kfar Hahoresh, Galilee, Israel». *Neo-lithics 1998/03* (1998) : 1-4.

Goring-Morris, N. «Life, death and the emergence of differential status in the Near Eastern Neolithic: evidence from Kfar HaHoresh, Lower Galilee, Israel». *In* J. Clark (ed.) *Archaeological perspectives on the transmission and transformation of culture in the Eastern Mediterranean* (2005) : 89-105.

Kenyon, K. «Excavations at Jericho». *Palestine Exploration Quarterly* 85 (1953) : 81-83.

Kenyon, K. «Excavations at Jericho». *Palestine Exploration Quarterly* 88 (1956) : 67-77.

Kenyon, K. and Holland, T. (ed.). Excavations at Jericho III, The Architecture and Stratigraphy of the Tell, Text. London, 1981.

Kenyon, K. and Holland, T. (ed.). Excavations at Jericho III, The Architecture and Stratigraphy of the Tell, Plates. London. 1981.

Khalaily, H., Milevsky, I., Getzov, N., Hershkovitz, I., Barzilai, O., Yarosevich, A., Shlomi, V., Najjar, A., Zidan, O., Smithline, H. and Liran, R. « Recent Excavations at the Neolithic Site of Yiftahel (Khalet Khalladyiah), Lower Galilee ». *Neo-lithics*, 2/08 (2008) : 3-11.

Kuijt, I. *Life in Neolithic Farming Communities. Social Organization, Identity, and Differentiation*, New-York, 2000.

Kuijt, I. «The Regeneration of Life. Neolithic Structures of Symbolic Remembering and Forgetting». *Current Anthropology* 49/2 (2008) : 1-20.

Lechevallier, M. and Ferembach, D. « Découverte de deux crânes surmodelés dans une habitation du VIIe millénaire à Beisamoun, Israël ». *Paléorient* ½ (1973) : 223-230.

Le Fur ,Y. (éd.).*La mort n'en saura rien. Catalogue de l'exposition au Musée national des Arts d'Afrique et d'Océanie (12 octobre 1999-24 janvier 2000)*, Paris, 1999.

Mattews, R. et Hodder, I.

"Introduction". http://www.catalhoyuk.com/archive_reports/1994/ar94_01.html, 1994.

Milevski, I., Khalaily, H., Getzov N. and Hershkovitz, I. «The Plastered Skulls and Other PPNB Finds from Yiftahel, Lower Galilee (Israel)». *Paléorient* 34/2 (2008) : 37-46.

Özbek, M. «Remodeled Human Skulls in Koşk Höyük (Neolithic Age, Anatolia): A New Appraisal in View of Recent Discoveries». *Journal of Archaeological Science* 36 (2009) : 379-386.

Rollefson, G. «The 1983 Season at the Early Neolithic Site of 'Ain Ghazal». *National Geographic Research* 1(1) (1985) : 43-61.

Rollefson, G., Simmons, A. and Kafafi, Z. « Neolithic Culture at 'Ain Ghazal, Jordan». *Journal of Field Archaeology* 19 (1992) : 443-469.

Rollefson, G. «Changes in Architecture and Social Organization at 'Ain Ghazal». *The Prehistory of Jordan II. Perspectives from 1997*, Studies in Early Near Eastern Production, Subsistence, and Environment 4 (1997) : 287-307.

Rollefson, G. «The Aceramic Neolithic of Jordan». *British Archeological Reports International series* 705 (1998) : 102-126.

Rollefson, G., Grisson, C. and Griffin, P. «Three late eight millennium plastered faces from 'Ain Ghazal, Jordan». *Paléorient* 24/1 (1998) : 59-70.

Schmandt-Besserat, D. «From Behind the Mask : Plastered Skulls from 'Ain Ghazal». *Origini. Preistoria e Protoitoria delle civilita antiche* XXIV (2002) : 95-139.

Simmons, A., Boulton, A., Butler, C., Kafafi, Z. and Rollefson, G. «A Plastered Human Skull from Neolithic 'Ain Ghazal, Jordan». *Journal of Field Archaeology* 17 (1990) : 107-110.

Stordeur, D. and Abbès, F. «Du PPNA au PPNB : Mise en lumière d'une phase de transition à Jerf el Ahmar (Syrie ». *Bulletin de la société préhistorique française* 99/3 (2002) : 563-595.

Stordeur, D. « Des crânes surmodelés à Tell Aswad de Damascène (PPNB – Syrie) ». *Paléorient* 29/2 (2003) : 109-115.

Stordeur, D. *Tell Aswad, Rapport Scientifique* 2006, Berrias, 2006.

Stordeur, D. and Khawam, R. « Les crânes surmodelés de Tell Aswad (PPNB, Syrie). Premier regard sur l'ensemble, premières réflèxions ». *Syria* 84 (2007) : 5-32.

Tunca, O. « La « Révolution » Néolithique ». *Bulletin de la Société Royale des Sciences de Liège* 73/4 (2004) : 211-223.

Yakar, R. and Hershkovitz, I. «Nahal Hemar Cave. The Modeled Skulls». *'Atiqot English Series* XVIII (1988) : pp. 59-63.